

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listings of claims in the application.

1. (currently amended) A system for securely storing medical data [[,]]; comprising  
an input process allowing an individual to enter identity information and medical data to  
associate with the identity information and including a private identity generator for generating a  
unique private identity for the individual independent of the identity information,  
an encryption key process for providing to each individual an encryption key for  
encrypting medical data associated with the individual, and  
a data table generator for storing medical data including encrypted medical data, in a  
table, whereby stored medical data from different individuals may be encrypted with different  
encryption keys.
2. (currently amended) A system according to claim 1[[,]]; further comprising  
a key table generator for storing the encryption key in a key table.
3. (cancelled)
4. (currently amended) A system according to claim [[3,]]1; wherein the private identity  
generator includes a random number generator for generating a random number for the private  
identity.
5. (canceled)
6. (currently amended) A system according to claim [[3,]]1; further including  
means for employing the private identity as a relational link key for relating medical data  
associated with the individual to the encryption key associated with the individual.
7. (currently amended) A system according to claim [[3,]]1; wherein the encryption key  
process includes  
a process for generating the encryption key as a function of the private identity.

8. (currently amended) A system according to claim 1; wherein the encryption key process includes
- a process for generating the encryption key as an asymmetric function of the private identity.
9. (currently amended) A system according to claim 1; wherein the encryption key process includes
- a process for generating the encryption key as a symmetric function of the private identity.
10. (currently amended) A system according to claim 2; further including
- a table encryption process for encrypting the key table to secure the encryption key stored therein.
11. (currently amended) A system according to claim 1; further comprising
- a relational link generator for processing the private identity to generate a relational link for associating medical data in the data table with a respective private identity.
12. (currently amended) A system according to claim 1; wherein the relational link generator includes a process for processing the private identity selected from the group consisting of a symmetric key algorithm, an asymmetric key algorithm, ~~an asymmetric key algorithm,~~ and a hash algorithm.
13. (currently amended) A system for storing medical data; comprising
- an input process for allowing an individual to enter identity information and medical data to associate with the identity information,
  - a private identity generator for generating ~~independent of the identity information,~~ a unique private identity for the individual independent of the identity information,
  - an encryption key process for providing to the individual a respective encryption key for encrypting the medical data of the individual,

a relational link generator for providing relational links for the medical data and the encryption key associated with the individual, whereby the medical data and encryption key can be stored in a table of a relational database.

14. (currently amended) A system according to claim 13[[,]]; wherein the relational link generator includes an encryption process for encrypting a relational link for accessing medical and/or the encryption key.

15. (currently amended) A system according to claim 13[[,]]; wherein the relational link generator includes a hash process for generating a relational link as a hash function of the private identity.

16. (currently amended) A system according to claim 13[[,]]; wherein the private identity generator includes a random number generator for generating the private identity as a function of a random number.

17. (currently amended) A system according to claim 16[[,]]; wherein the relational link generator includes a process for encrypting the private identity to provide an encrypted relational link.

18. (currently amended) A process for controlling access to medical data[[,]]; comprising:  
allowing an individual to provide medical data and identity information,  
providing the individual with a private identity independent of the identity information  
and storing the medical data and identity information in tables of a relational database employing the private identity to provide a relational link to the medical and identity data,  
employing the private identity to create an encryption key for the respective individual,  
and  
encrypting, as a function of the encrypting key, medical data associated with the individual, whereby medical data of different individuals are encrypted with different respective encryption keys.

19. (currently amended) A process according to claim 18[[,]]; further comprising:

allowing a medical professional to search the relational database to identify medical data of interest.

20. (currently amended) A process according to claim 18[[],]; further comprising:  
allowing a medical professional to request identity information associated with medical data in the relational data base, and employing the private identity to notify the respective individual of the request.
21. (currently amended) A process according to claim 18[[],]; further comprising:  
allowing the individual to control access to the medical data of the individual.
22. (currently amended) A process according to claim 18[[],]; further comprising:  
allowing the individual to store portions of the medical data in the clear and portions in an encrypted form.
23. (currently amended) A process according to claim 22[[],]; comprising:  
allowing a medical professional to search the relational database.